

WHAT IS CLAIMED IS:

1. Isolated nucleic acid encoding a *CYP52A2B* protein having the amino acid sequence set forth in SEQ ID NO: 97.
2. Isolated nucleic acid comprising a coding region defined by nucleotides 1072-2640 as set forth in SEQ ID NO: 87.
3. Isolated nucleic acid according to claim 2 comprising the nucleotide sequence as set forth in SEQ ID NO: 87.
4. A vector comprising a nucleotide sequence encoding *CYP52A2B* protein including an amino acid sequence as set forth in SEQ ID NO: 97. ;
5. A vector according to claim 4 wherein the nucleotide sequence is set forth in nucleotides 1072-2640 of SEQ ID NO: 87.
6. A vector according to claim 4 wherein the vector is selected from the group consisting of plasmid, phagemid, phage and cosmid.
7. A host cell transfected or transformed with the nucleic acid of claim 1.
8. A host cell according to claim 7 wherein the host cell is a yeast cell.
9. A host cell according to claim 8 wherein the yeast cell is a *Candida sp.*
10. A host cell according to claim 9 wherein the *Candida sp.* is *Candida tropicalis*.
11. A host cell according to claim 10 wherein the *Candida tropicalis* is *Candida tropicalis* 20336.

12. A host cell according to claim 11 wherein the *Candida tropicalis* is H5343 ura-.

13. A method of producing a *CYP52A2B* protein including an amino acid sequence as set forth in SEQ ID NO: 97 comprising:

- a) transforming a suitable host cell with a DNA sequence that encodes the protein having the amino acid sequence as set forth in SEQ ID NO: 97; and
- b) culturing the cell under conditions and in media favoring the expression of the protein.

14. The method according to claim 13 wherein the step of culturing the cell comprises adding an organic substrate to the media containing the cell.

15. A method for increasing production of a dicarboxylic acid comprising:

- a) providing a host cell having a naturally occurring number of *CYP52A2B* genes;
- b) increasing, in the host cell, the number of *CYP52A2B* genes which encode a *CYP52A2B* protein having the amino acid sequence as set forth in SEQ ID NO: 97;
- c) culturing the host cell in media containing an organic substrate which upregulates the *CYP52A2B* gene, to effect increased production of dicarboxylic acid.

16. A method for increasing the production of a *CYP52A2B* protein having an amino acid sequence as set forth in SEQ ID NO: 97 comprising:

- a) transforming a host cell having a naturally occurring amount of *CYP52A2B* protein to increase the copy number of *CYP52A2B* genes that encode the *CYP52A2B* protein having the amino acid sequence as set forth in SEQ ID NO: 97; and
- b) culturing the cell and thereby increasing expression of the protein as compared to an untransformed host cell.